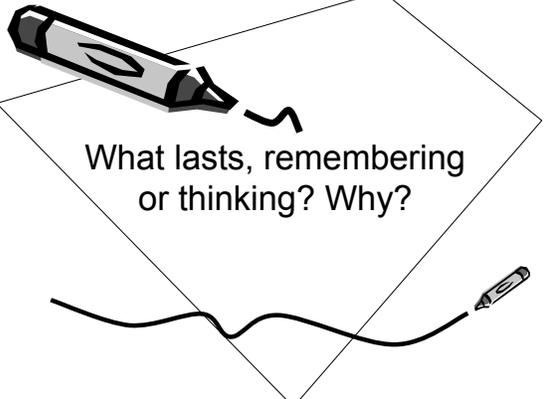
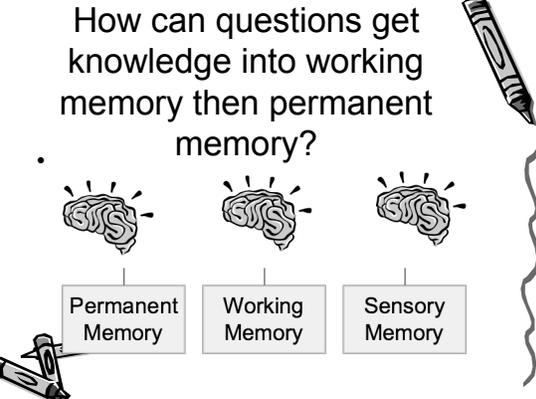


WHY ask Questions?
Instructional Theory Workshop
Jan 11, 2006



What lasts, remembering or thinking? Why?

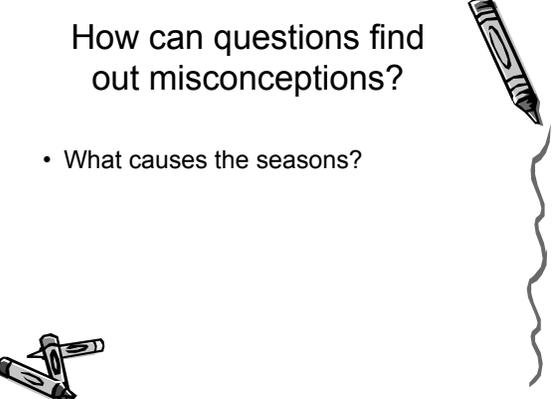


How can questions get knowledge into working memory then permanent memory?

-

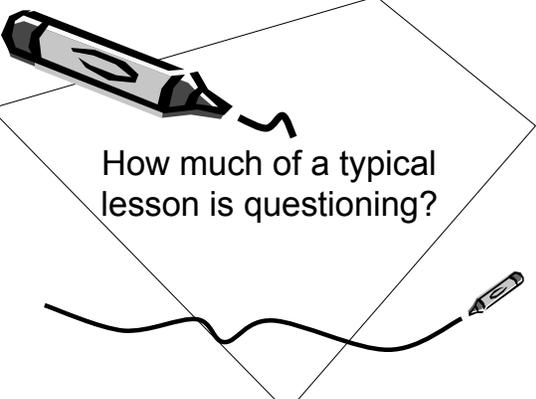


Permanent Memory Working Memory Sensory Memory

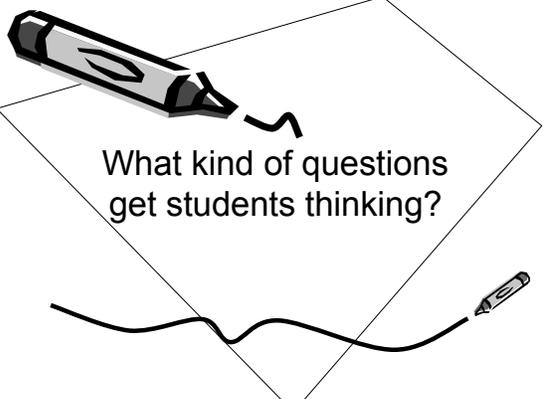


How can questions find out misconceptions?

- What causes the seasons?



How much of a typical lesson is questioning?



What kind of questions get students thinking?



How does questioning support active learning?

Is thinking driven by answers or questions?



Which question is better?

- What did you learn from the reading?
- What are the five most important facts from the reading and why?



Should questions have a purpose?



What types of questions do we use in teaching?

- What are advance organizers?
- What are cues?
- What are input/focusing questions?
- What are discussion questions?
- What are summary questions?

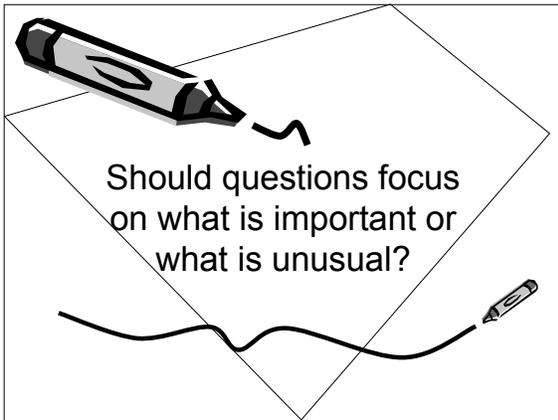


How do advance organizers work?



How do cues affect student learning?





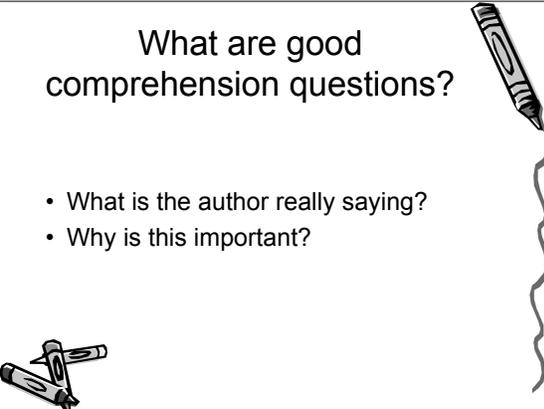
Why doesn't just giving the vocabulary and definition work?

- Are students just linguistic learners?
- Do students understand new words as descriptions or definitions?
- How do students make their own meaning of new ideas and concepts?



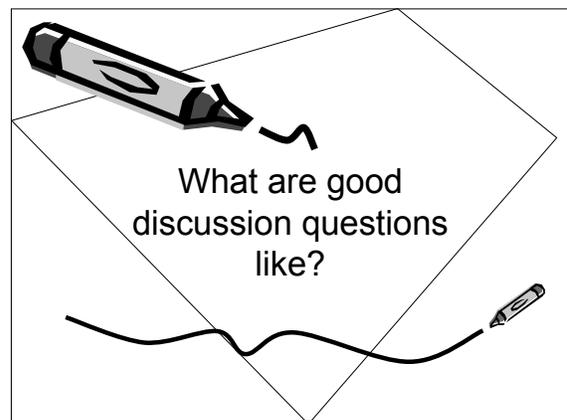
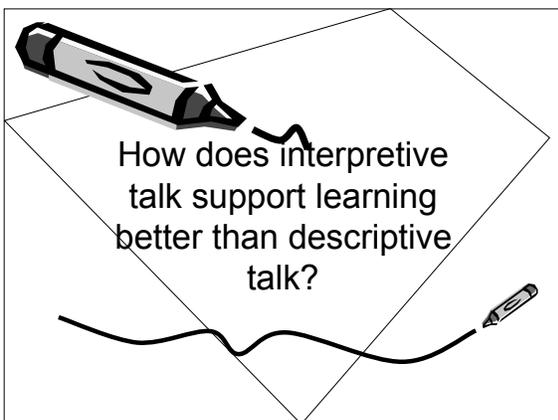
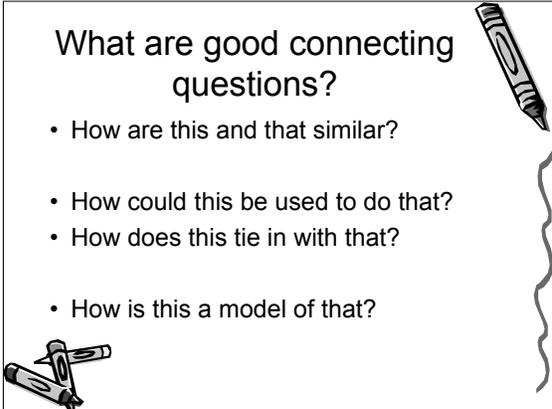
What are good comprehension questions?

- What is the author really saying?
- Why is this important?



What are good connecting questions?

- How are this and that similar?
- How could this be used to do that?
- How does this tie in with that?
- How is this a model of that?



What are good summary questions?

- Which things were hardest to learn and why?
- What was most interesting?



How do we compose powerful questions?

What if all questions were “hypothetical”?

- What if the moon didn't exist?
- What would Wizard of Oz be like from the witch's POV?
- What if we could only speak in future tense?
- What if there were no curves?



What does a class with all questions look like?

- Why do things move?
- Why is friction important?
- How do we measure friction?



Could we really use Socratic questioning?

- What is history? -> What do historians write about? -> What is the past? -> Is it possible to include all of the past in a history book? -> How many of the events during a given time period are left out in a history of that time period? -> Is more left out than is included? -> How does a historian know what to emphasize or focus on? -> Do historians make value judgments in deciding what to include and what to leave out? -> Is it possible to simply list facts in a history book or does all history writing involve interpretations as well as facts? -> Is it possible to decide what to include and exclude and how to interpret facts without adopting a historical point of view? -> How can we begin to judge a historical interpretation? -> How can we begin to judge a historical point of view?



What does the research show us about bad questioning?

What is wrong with these questions?

- Verification questions – did I tell you the homework had to be today?
- Closed questions – have a 'yes', 'no' answer
- Rhetorical questions – the answer is in the question eg who led Sherman's march through Georgia?
- Defensive questions – why are you misbehaving again?
- Agreement questions – this is the best solution isn't it?

What's the best way to ask questions?

- How should you ask?
- Whom should you ask?
- How should you listen?
- How should you respond?

What effect does increasing wait time have?

How should teachers respond to correct/incomplete answers?

How should teachers respond to incorrect answers?

How can we get students to generate questions?

References?

- D. Grayson and M. Martin, *The GESAFacilitator*, GrayMill., Earlham, Iowa
- Marzano, R.J., Pickering, D. J., & Pollock, J. E. (2001)
Classroom Instruction That Works: Research-based strategies
- *Activating and Engaging Habits of Mind*, Arthur Costa and Bena Kallick, ASCD 2000, ISBN 0-87120-369-3
- *Quality Questioning, Research Based Practice to Engage Every Learner*, Jackie Acree Walsh & Beth Dankert Sattes, Corwin Press, 2005 ISBN1-4129-0986-4
- "The Role of Socratic Questioning" in Paul, Martin, Adamson *Critical Thinking Handbook: High School A Guide for Redesigning Instruction* Foundation for Critical Thinking 1989 ISBN 0-944583-03-2



- Deep questions drive our thought underneath the surface of things, force us to deal with complexity.
- Questions of purpose force us to define our task.
- Questions of information force us to look at our sources of information as well as at the quality of our information.
- Questions of interpretation force us to examine how we are organizing or giving meaning to information and to consider alternative ways of giving meaning.
- Questions of assumption force us to examine what we are taking for granted.
- Questions of implication force us to follow out where our thinking is going.
- Questions of point of view force us to examine our point of view and to consider other relevant points of view.
- Questions of relevance force us to discriminate what does and what does not bear on a question.
- Questions of accuracy force us to evaluate and test for truth and correctness.
- Questions of precision force us to give details and be specific.
- Questions of consistency force us to examine our thinking for contradictions.
- Questions of logic force us to consider how we are putting the whole of our thought together, to make sure that it all adds up and makes sense within a reasonable system of some kind.

